

## An Additional Annotated List of the Ants of Mississippi.

### With a Description of a New Species of *Aphaenogaster* (Hym.: Formicidae).\*

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In a previous paper (ENT. NEWS, Vol. 38, pp. 308-314, (1927), 11 species of ants were recorded as new to the state, thus making a total of 87 species for Mississippi. In the present article 19 additional species are listed, one of these being a new subspecies of *Aphaenogaster texana* Emery, which is subsequently described.

Descriptions are given for the female of *Phacidole dentigula* M. R. Smith and also for what is apparently the male of *Sysphincta pergandei* Emery.

The species are not only numbered and listed below according to their respective subfamilies but are also accompanied by the usual biological notes.

#### Subfamily PONERINAE.

##### 88.—*SYSPHINCTA PERGANDEI* Emery.

♂ Length: 3.6 mm. Head, excluding the mandibles, slightly broader than long when measured from side to side thru the center of the eyes, posterior border and posterior angles strongly rounded. Vertex with 3 prominent ocelli, the distance between one of the lateral and the median ocellus less than that between the two lateral ocelli. Eyes large, elliptical, and convex, the interior borders of each almost parallel with one another. Cheeks, due to the extensive size of the eyes, poorly developed. Clypeus strongly protuberant medianly, the posterior border extending as a sharp angular point past the insertions of the antennal scapes. An apparently faint furrow or groove extending from the depressed frontal area to the anterior border of the median ocellus. Mandibles triangular, with a sharp apical and a blunt basal tooth, the dental borders between the two strongly emarginate. Maxillary palpi 4-segmented, labial palpi 2-segmented. Antennae 13-segmented, pedicel subglobular, funiculus filiform.

Thorax short and massive; viewed dorsally, the mesonotum and scutellum comprise the greater part of the thorax. Pro-

\*A contribution from the Mississippi Agricultural Experiment Station.

notum somewhat concealed by the mesonotum, and with the anterior border strongly reflexed at its junction with the head. Mesonotum without Mayrian furrows, but with a parapsidal furrow on each side. A deep, but narrow, depressed area bearing longitudinal striae, between the mesonotum and scutellum. Metanotum forming a rather angular tooth, which is carinate medianly. The concave, declivous surface of the epinotum, longer than the base of the epinotum. Pedicel 1—segmented, the node or petiole with the posterior border constricted and reflexed. First segment of the gaster, also constricted at its base and apex, and at least twice as broad as the petiole. Gaster with 6 visible segments dorsally, the second segment occupying a very large proportion of its area.

Mandibles shining, sparsely punctate. Mesepisternum of the thorax, and the gaster, smooth and shining. Antennae and legs subopaque. Remainder of the body rather opaque due to the sculpturing and pubescence.

Hairs grayish, short, suberect, covering all parts of the body. Pubescence fine and distinct, also covering all parts of the body, but not easily discernible on the thorax and gaster, giving these parts in certain lights, a fulvous color.

Head, excluding the mandibles, cheeks, clypeus, antennae, and the dorsum of the thorax, and the gaster, almost black. Mandibles yellowish; cheeks, clypeus, antennae, legs, lateral parts of thorax, and the venter varying from ferruginous to brown.

Although the worker of this species was described by Emery in 1895, apparently no one has published a description of the male of this rare, primitive ant. The above description is based on an alate specimen which was collected at Artesia, Mississippi, on the afternoon of August 26th, 1927.

*S. pergandei* Emery, although a very rare ant, is the most common species of this genus. Wheeler states that the ants nest under stones in rather moist places, usually in meadows. The colonies are composed of only a very few individuals. The ants which are subterranean in habits apparently feed on the flesh of organisms. The species, *S. pergandei* is common to the eastern half of the United States.

#### 89.—STIGMATOMMA PALLIPES Haldeman.

Adaton. Only one specimen (a worker) of this primitive ant has been taken in this state. This specimen which is larger, more ferruginous brown and more heavily sculptured than the

specimens of *pallipes* from Wisconsin in my collection, may prove to be a new subspecies or variety. The ant was taken in the rather dense, moist woods at Adaton. The student who collected the ant could not furnish any definite information as to the exact spot in which he captured the individual.

90.—*PROCRATIUM CROCEUM* Roger.

Columbus. Three dealated females of what is apparently this species were taken in a small woodland patch near Columbus. One of the females was found beneath the bark of a pine log in the vicinity of the following other species of ants: *Strumigenys pulchella* Emery and *Aphaenogaster lamellidens* var. *nigripes* M. R. Smith. An interesting myrmecophilous beetle, *Tmesiphorus carintus* (Say), was also found here. The two remaining females were secured from beneath the bark of pine stumps. One of these was found beneath the bark of a stump along with the following ants: *Solenopsis molesta* Say, *Strumigenys pulchella* Emery and *Pheidole dentata* Mayr. No workers were seen with any of the females although a careful search was conducted for them.

The female of *P. croceum* can be distinguished from the female of the other North American species of *Proceratium* by its large size (5 mm.) and by its much thicker petiolar scale.

91.—*PROCRATIUM CRASSICORNE* Emery.

Columbus. One dealated female of what is apparently this species was taken from beneath the bark of a pine stump in the same habitat as the preceding species. The frass beneath the bark was fine and slightly moist.

92.—*PONERA GILVA* Roger.

Columbus. Approximately forty workers were collected from beneath the bark of a pine log in the same habitat as the species of *Proceratium* mentioned in this article. The frass beneath this log was very moist as was also the log. No immature stages or sexed forms of the ants were observed. The workers which bear somewhat of a resemblance to the workers of *Proceratium* were very slow of movement. Some of these tried to escape capture by hiding in crevices and remaining perfectly quiet. From the same log were collected two individuals of a new species of Fulgorid belonging to the genus

*Epiptera* and the ants: *Pheidole dentata* Mayr and *Aphaenogaster texana* var. or subsp. *Ponera gilva* Roger does not appear to be as common in Mississippi as some of the other species of *Ponera*.

The worker of this yellowish or somewhat ferruginous colored species can be distinguished from the worker of the other species of *Ponera* in Mississippi by its laterally margined epinotum and by its very much thickened (longitudinally) petiolar scale.

#### Subfamily DORYLINAE.

##### 93.—ECITON (A.) CAROLINENSIS Emery.

Ellisville, A. and M. College, Columbus. Three colonies of this ant have been seen in Mississippi and strange to say all of these were found in some form of decaying wood. A colony at Ellisville occurred in the rotten branch of a tree. The branch was about six inches wide and four feet long. A single female and from 5,000-10,000 workers and some larvae were noted inside the branch. At A. and M. College another colony approximately the same size was located in the base of a rotten pine stump. At Columbus a third colony was noted nesting inside of a fence post lying in a pasture. The post although firm outside was hollow inside and furnished excellent quarters for the colony which consisted of a single female, many workers and some larvae.

The worker of *E. carolinensis* bears a striking resemblance to the worker of *E. opacithorax* Emery. The worker can be distinguished from the worker of that species however, by the more nearly square petiole and postpetiole and by the much more heavily incrassated antennae.

#### Subfamily MYRMICINAE.

##### PHEIDOLE DENTIGULA M. R. Smith.

♀. Length: 3.5 mm. Head, excluding the mandibles, slightly longer than broad, with rather widely and deeply emarginate posterior border, and rounded, yet distinct posterior angles. Anterior border of gula with two short, coarse teeth, which are easily seen when the head is viewed from the side. Mandibles large, somewhat flattened dorsally, each with 2 large apical and 2 small basal teeth. Clypeus emarginate. Frontal area small, subtriangular, broader than long. Antennal scapes

slender, longer than in the worker, but yet not attaining the posterior angles of the head. Vertex with 3 large and prominent ocelli.

Thorax short, robust. Humeral angles of the prothorax well developed but obscured from above, by the rounded anterior border of the large and prominent mesonotum. Parapsidal furrows on the mesonotum not clearly discernible. Viewed laterally the mesonotum and scutellum are flattened. Epinotum with a pair of large, blunt, angular teeth or spines, the area between these concave.

Postpetiole about two and one-half times as wide as long, the sides conulate. Postpetiole at least twice as wide as the petiole. Gaster with distinct humeral angles.

Mandibles and clypeus shining, the former with prominent, scattered punctures. Head subopaque, longitudinally rugulose, with the areas between the rugulae finely punctulate, the region around the posterior angles reticulate-punctulate. Mesonotum, mesopleurae, metanotum, scutellum, legs, postpetiole and gaster smooth and shining. Epinotum long, transversely rugulose-punctate.

Hairs pale yellowish, long and abundant, suberect to erect. Ferruginous; mandibles, and sclerites at base of wings darker.

The above description is based on a dealate female, which with a worker was taken at A. and M. College. Both individuals were found in rich mucky soil around the base of a stump. The soldier and worker were described in a previous paper.

94. *APIHAENOGASTER LAMELLIDENS* Mayr.

Ocean Springs. A number of workers from the above locality were sent to the writer by the late R. P. Barnhart, without remarks concerning their nesting habits. The variety *nigripes* M. R. Smith, appears to be more common than *lamellidens* in this state, and is usually found nesting in logs or in the soil beneath them.

95.—*APHAENOGASTER FULVA* subsp. *AQUIA* Buckley.

Rara Avis. Several workers of this species were collected from the ground in a dense patch of woodland at the above locality. As Emery has remarked, *aquia* is somewhat smaller than *fulva* Roger (4.-4.66 mm.). The epinotal spines are shorter than half of the basal surface of the epinotum and the anterior portion of the mesothorax when viewed from the side does not extend beyond the general surface of the prothorax so prominently as with *fulva*. The sculpturing is also weaker.

(To be continued.)